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# 4-1123  
**BRENNTAG**

Stinnes Logistics

258841  
RSPA-03-16490-1  
**Brenntag Mid-South, Inc.**

ASSOCIATE ADMINSTRATOR FOR HAZARDOUS MATERIALS SAFETY  
RESEARCH AND SPECIAL PROGRAMS ADMINSTRATION  
U.S.DEPARTMENT OF TRANSPORTATION  
400 7th STREET SW  
WASHINGTON, DC 20590-0001  
ATTN: EXEMPTIONS, DHM-31

DEAR SIR OR MADAM,

BRENNTAG MID-SOUTH, INC. REQUESTS AN EXEMPTION FOR  
RELIEF FROM REGULATION 49CFR 107.117 (a) (3).

THIS EXEMPTION WOULD RELIEVE BRENNTAG MID-SOUTH, INC.  
1405 HWY 136 WEST, HENDERSON, KY 42420 FROM APPLYING FOR A  
EMERGENCY PROCESSING APPLICATION IN EACH EVENT A LEAKING CONTAINER,  
THAT HAS BEEN SECURED NEEDS TO BE TRANSPORTED BY MOTOR VEHICLE  
TRANSPORTATION.

THIS EXEMPTION WOULD ONLY COVER THE FOLLOWING PRODUCT.  
ANHYDROUS AMMONIA UN1005 2.3.

THIS EXEMPTION WOULD COVER THE USE OF AN AMMONIA  
EMERGENCY KIT. THIS KIT IS DESIGNED FOR CONTAINING LEAKS AT THE  
VALVE AND SIDE WALL OF AMMONIA CYLINDERS CONFORMING TO D.O.T.  
SPECIFICATION 3A480 & 4AA480.

A COPY OF THIS EXEMPTION WOULD BE APPLIED TO THE  
SECURED CONTAINER BEFORE TRANSPORTING BY MOTOR VEHICLE.

BRENNTAG MID-SOUTH, INC.  
1405 HWY 136 WEST  
HENDERSON, KY 42420  
A B EARGOOD  
270-830-1318  
beargood@brenntag.com

105  
173.301(f)

ATTACHED IS INFORMATION ON ONE TYPE OF AMMONIA EMERGENCY KIT  
USED FOR SECURING LEAKING AMMONIA CYLINDERS.

THANK YOU

A B EARGOOD

06/10/03

**Brenntag Mid-South, Inc.**

1405 Highway 136 West  
PO Box 20  
Henderson, KY 42419-0020

03 JUN 12 PM 2:06

HAZMAT  
DOT/1000

RSMA-03

Brenntag

**INDIAN SPRINGS**

**ANHYDROUS AMMONIA**

**CYLINDER EMERGENCY KIT**

(For Ammonia Cylinders up to 15" in diameter and 56" tall)

E 13269  
Brenntag  
6/12/03

**NH<sub>3</sub>**

Edition 2  
January 1997

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## 1. GENERAL DESCRIPTION

The Indian Springs Anhydrous Ammonia Emergency Kit is designed for use with standard DOT 3A480 or 4AA480, 100 and 150 pound capacity cylinders in service. The cylinders have outside diameters from approximately 8 to 15 inches and overall heights up to 60 inches. The kit is designed for use with all configurations of standard cylinders. This kit should not be applied to a cylinder that is liquid full.  
(see page 9 section 7 under "Kit Limitations")

### 1.1 Training and Safety

Emergency Response and other personnel must be trained in the use of the devices and tools within The IS Anhydrous Ammonia Emergency Kit. Training must include the use of equipment and all other safety equipment. Knowledge of the properties of Anhydrous Ammonia is a must.

Personnel safety is of primary importance. Emergency response should only be performed by authorized personnel who are trained in the procedures and are equipped with suitable respiratory and personal protective equipment.

### 1.2 Respiratory Equipment

The type of respiratory equipment required will be determined by the severity of the leak and the potential for exposure to Anhydrous Ammonia.

### 1.3 Cylinder Inspection

Daily inspection of full cylinders is recommended whether or not they are connected to unloading lines. Through these means a leak usually can be detected in an early stage when it can be corrected or controlled by appropriate procedures.

### 1.4 Leak Detection

As soon as there is any indication of the presence of ammonia in the air, authorized, trained personnel equipped with suitable personal protective equipment should investigate promptly. All other persons should be kept away from the affected area.

The location of a leak in an ammonia containing system can usually be detected by odor. Location of the leak may be found by using moist red litmus paper or moist filter paper impregnated with phenolphthalein. The chemical test papers will change color in the presence of ammonia. Sulfur Dioxide, which forms a white cloud when in contact with ammonia vapor, can also be used.

1.5 Assistance

Ammonia emergencies should be handled only by trained personnel at the use site. If assistance is required, promptly notify your supplier. If the supplier cannot be reached or respond immediately, then summon help by calling CHEMTREC in the US at 1-800-424-9300 or CANUTEC in Canada at 1-613-996-6666.

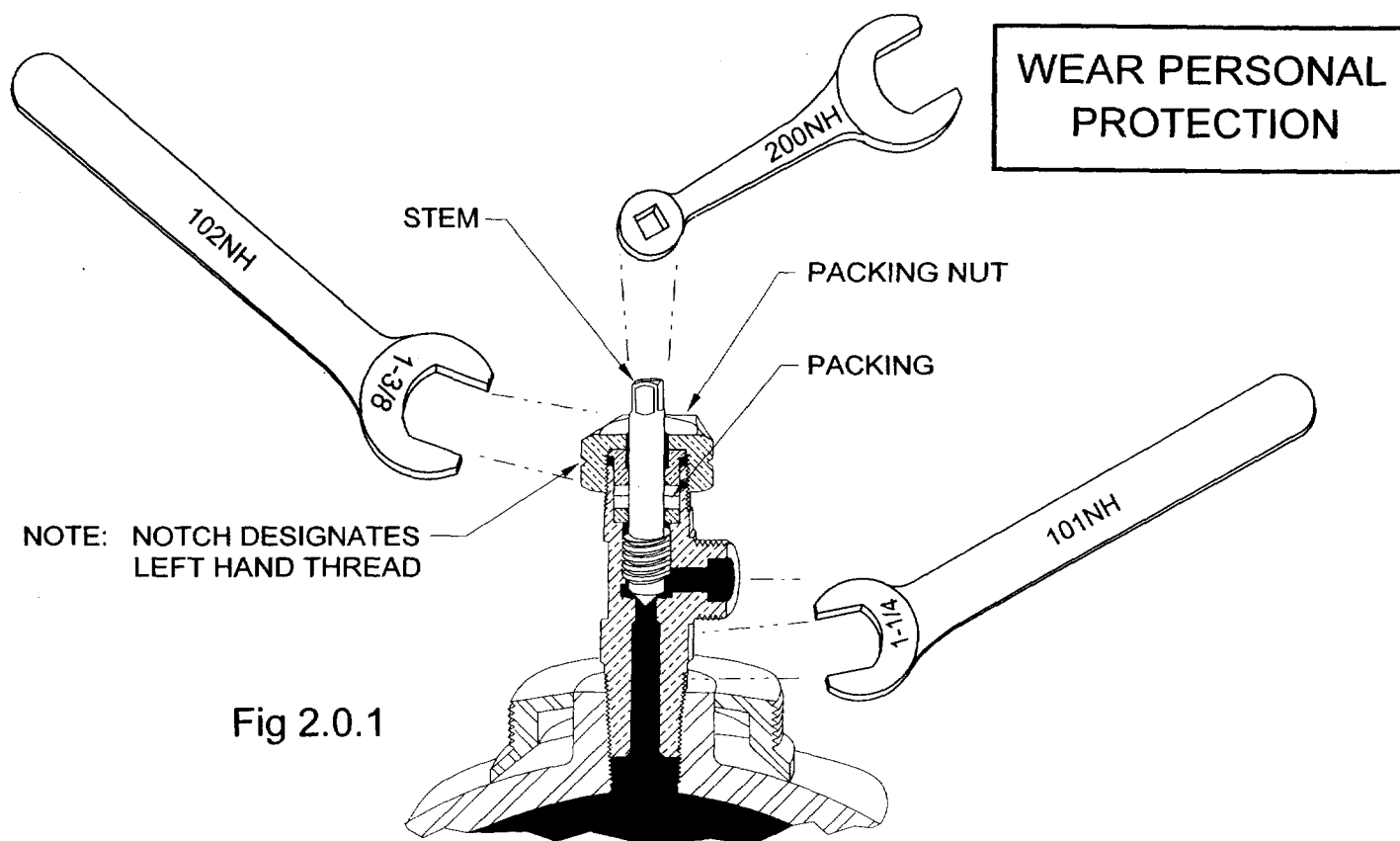
1.6 Reporting Requirements

You should be aware that there are Federal, State and Local requirements for the reporting of ammonia releases. You must comply with these requirements.

1.7 Emergency Plan

It is recommended that users have an Emergency Plan that complies with Federal, State and Local requirements.

## 2. IDENTIFYING AND STOPPING LEAKS



### 2.1 LEAK: Valve stem packing

ACTION: A) Ensure valve stem is closed with WRENCH 200NH

B) Tighten packing nut with WRENCH 102NH

**NOTE** The standard ammonia valve, CGA240, has a LEFT HAND thread on the packing nut and must be turned COUNTER-CLOCKWISE to close.

### 2.2 LEAK: Through valve seat (will not completely close)

ACTION: If disconnecting from a process, reconnect and gently open and close valve stem to dislodge foreign matter from seat, with WRENCH 200NH.

### 2.3 LEAK: Valve inlet threads

ACTION: A) Tighten valve CLOCKWISE into cylinder slowly with steady pressure using WRENCH 101NH,

- or -

B) Apply DEVICE 1NH (Hood Assembly) (see page 5 for instructions)

**NOTE** The above mentioned leaks can also be corrected by applying DEVICE 1NH (Hood Assembly). (see page 5 for instructions)

## 2. IDENTIFYING AND STOPPING LEAKS (con't)

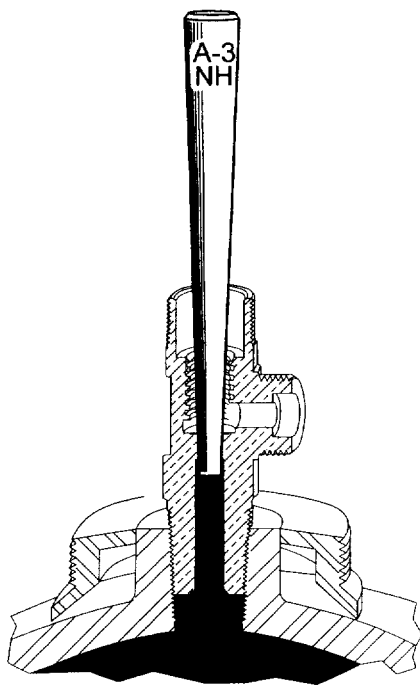


Fig 2.4.1

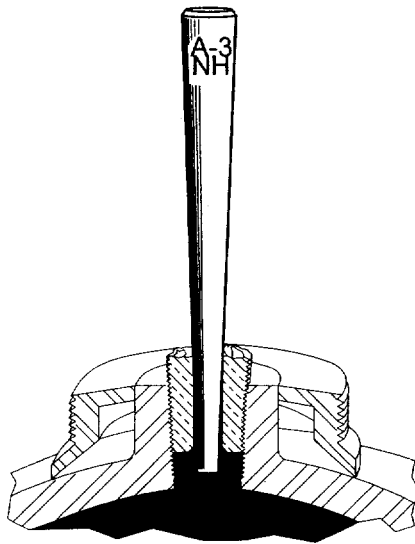


Fig 2.5.1

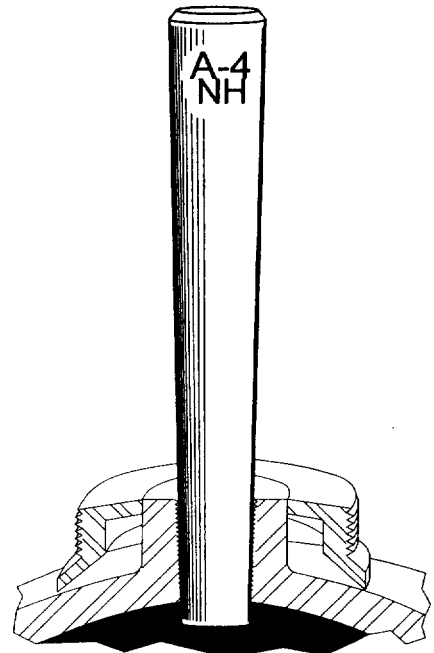


Fig 2.6.1

2.4 **LEAK:** Valve stem assembly blown out

**ACTION:** Drive small DRIFT PIN A-3NH (Fig 2.4.1) into valve body

**NOTE** DEVICE 1NH (Hood Assembly) will probably not fit over the DRIFT PIN A-3NH. Secure the cylinder in an isolated area and call your ammonia supplier.

2.5 **LEAK:** Valve broken off

**ACTION:** Drive small DRIFT PIN A-3NH (Fig 2.5.1) into valve shank and apply DEVICE 1NH (Hood Assembly) (See page 5 for instructions)

2.6 **LEAK:** Valve blown out (due to stripped threads)

**ACTION:** Drive large DRIFT PIN A-4NH (Fig 2.6.1) into valve opening and apply DEVICE 1NH (Hood Assembly) (See page 5 for instructions)

**WEAR PERSONAL  
PROTECTION**

### 3. HOOD ASSEMBLY FOR VALVE - DEVICE 1NH

STEPS - See Fig 3.1	EQUIPMENT
<ol style="list-style-type: none"> <li>1. Remove valve protective housing if in place. Position cylinder so that the valve is in the uppermost position.  <b>NOTE</b> If unable to remove valve protective housing, the HOOD (1ANH) should fit over it.</li> <li>2. Remove outlet cap from VENT VALVE (1VNH) on HOOD (1ANH) and open VALVE (1VNH).</li> <li>3. Prepare BASE ASSEMBLY (1ENH) to insure proper position and stability of base segments. Secure RAMP (1RNH) between two base segments by means of hook attached to center spacer slot to prevent sliding of BASE ASSEMBLY (1ENH) while cylinder is being positioned.</li> <li>4. Roll upright cylinder up RAMP (1RNH) and center in position on BASE ASSEMBLY (1ENH).</li> <li>5. Clean shoulder of cylinder: Use SCRAPER (A-8NH) if paint is loose or uneven.</li> <li>6. Inspect condition of GASKET (1EPR). (see page 9 under "Kit Maintenance") Place GASKET (1EPR) on HOOD (1ANH). Place HOOD (1ANH) with GASKET (1EPR) over leaking valve.</li> <li>7. Adjust CAP SCREWS (1DNH) and (1KNH) in YOKE (1CNH) so that the points of the screws extend only slightly below YOKE (1CNH).</li> <li>8. Place YOKE (1CNH) in position on top of HOOD (1ANH) with screws positioned in the dimples on top of HOOD (1ANH). Insure that CHAINS (1FNH) are straight and not twisted. Hook CHAINS (1FNH) over ears of YOKE (1CNH) using appropriate link to avoid slack in CHAINS (1FNH).</li> <li>9. Hand tighten CAP SCREWS (1DNH) and (1KNH). Tighten CAP SCREWS (1KNH) equally forcing the HOOD (1ANH) and GASKET (1EPR) against shoulder of cylinder. Keep CAP SCREW (1DNH) hand tight against center of HOOD (1ANH). If leak persists tighten CAP SCREW (1K1) further in area of leak.  <b>CAUTION</b> Check the foot ring on base of cylinder for possible deterioration due to excessive tightening of DEVICE 1NH. Insure that CHAINS (1FNH) are against side of cylinder at base.</li> <li>10. Close VENT VALVE (1VNH) on HOOD (1ANH).</li> <li>11. Test for leaks around GASKET (1EPR). Tighten CAP SCREW(S) (1KNH) if necessary.</li> </ol>	<p>WRENCH 200NH WRENCH 102NH</p> <p>BASE ASSY. 1ENH RAMP 1RNH</p> <p>SCRAPER A-8NH</p> <p>HOOD 1ANH GASKET 1EPR</p> <p>CAP SCREWS: (1) 1DNH, (3) 1KNH, WRENCH 101NH, YOKE 1CNH</p> <p>CHAINS 1FNH (WITH 1ENH ASSY) HOOD 1ANH YOKE 1CNH</p> <p>WRENCH 101NH</p> <p>WRENCH 200NH</p> <p>WRENCH 101NH</p>

#### DEVICE 1NH INCLUDES:

(3) CAP SCREWS - 1KNH  
CAP SCREW - 1DNH  
HOOD - 1ANH  
YOKE - 1CNH

GASKET - 1EPR  
RAMP - 1RNH  
BASE ASSEMBLY - 1ENH

WEAR PERSONAL  
PROTECTION



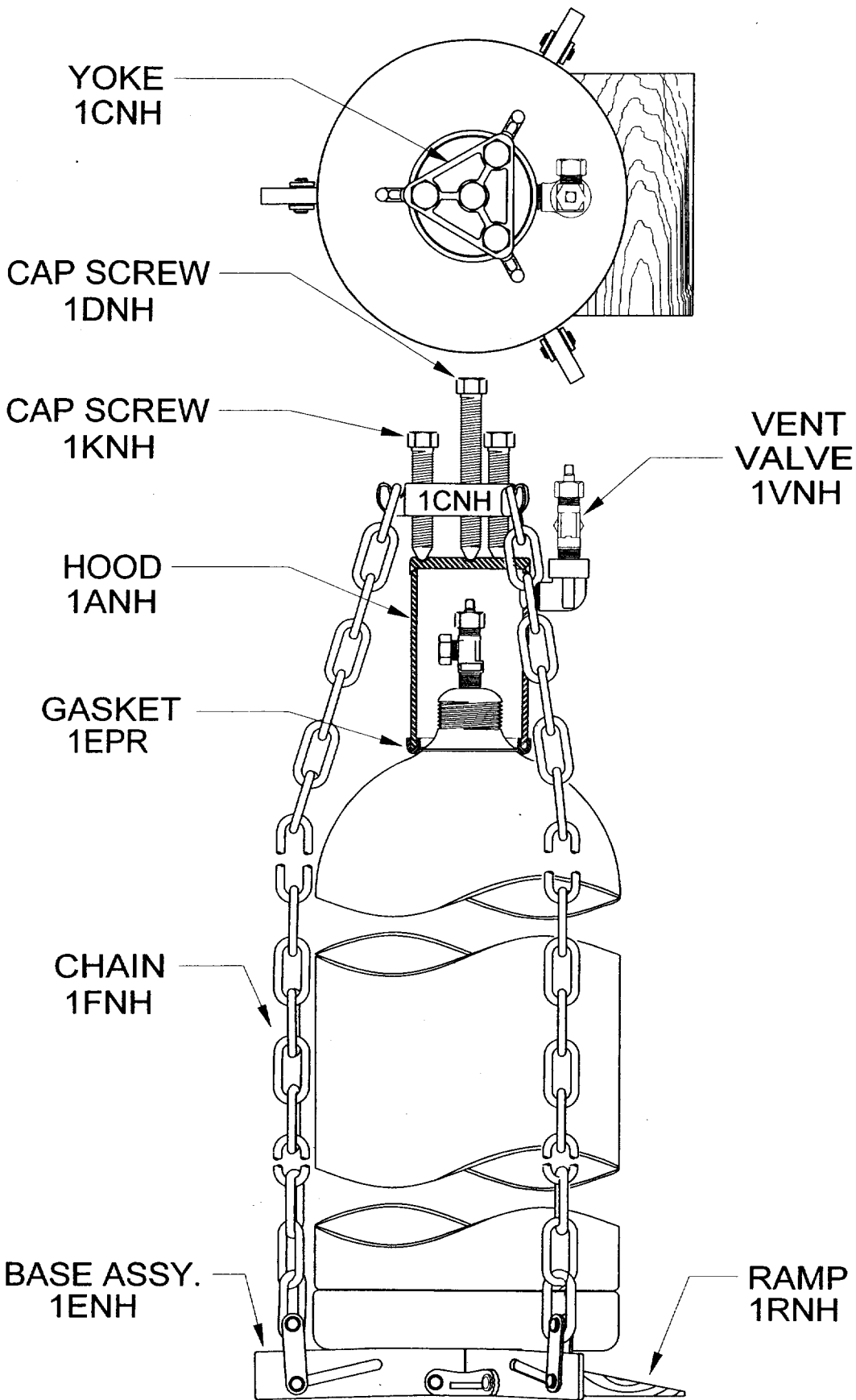


Fig 3.1

DEVICE 1NH

#### 4. PATCH FOR SIDE LEAKS - DEVICE 8NH

STEPS - See Fig 4.1	EQUIPMENT
<ol style="list-style-type: none"> <li>1. Roll cylinder so that leak is in uppermost position. Be sure cylinder wall around leak is sound before proceeding with application of device.</li> <li>2. Adjust CAP SCREW (8CNH) in YOKE (8BNH) until point of screw extends only slightly below YOKE (8BNH)</li> <li>3. Slip one end of CHAIN (8ANH) under cylinder and pull it through until it reaches the approximate area of leak. <b>NOTE</b> Insure CHAIN (8ANH) is straight and not twisted.</li> <li>4. Center CAP SCREW (8CNH) in YOKE (8BNH) in PATCH (8DNH) depression.</li> <li>5. Hook free ends of CHAIN (8ANH) to ears on each side of YOKE (8BNH), keeping CHAIN (8ANH) as short as possible.</li> <li>6. Use SCRAPER (A-8NH) if paint is loose or uneven. Place GASKET (8-9EP) and PATCH (8DNH) over leak. <b>NOTE</b> <i>Two GASKETS (8-9EP) may be required on slender cylinders. (about 12" in diameter and under)</i></li> <li>7. Tighten CAP SCREW (8CNH). <b>CAUTION</b> If there is any evidence of weakening of the cylinder wall, immediately discontinue tightening CAP SCREW (8CNH).</li> <li>8. Test for leaks. Tighten CAP SCREW (8CNH) further, if necessary.</li> </ol>	<p>YOKE 8BNH &amp; CAP SCREW 8CNH</p> <p>CHAIN 8ANH</p> <p>YOKE 8BNH &amp; CAP SCREW 8CNH PATCH 8DNH</p> <p>GASKET 8-9EP PATCH 8DNH &amp; SCRAPER A-8NH</p> <p>WRENCH 101NH</p> <p>WRENCH 101NH</p>

#### DEVICE 8NH INCLUDES:

CHAIN - 8ANH  
YOKE - 8BNH  
CAP SCREW - 8CNH

PATCH - 8DNH  
GASKET - 8-9EP

WEAR PERSONAL  
PROTECTION

PATCH FOR SIDE LEAKS    DEVICE 8NH

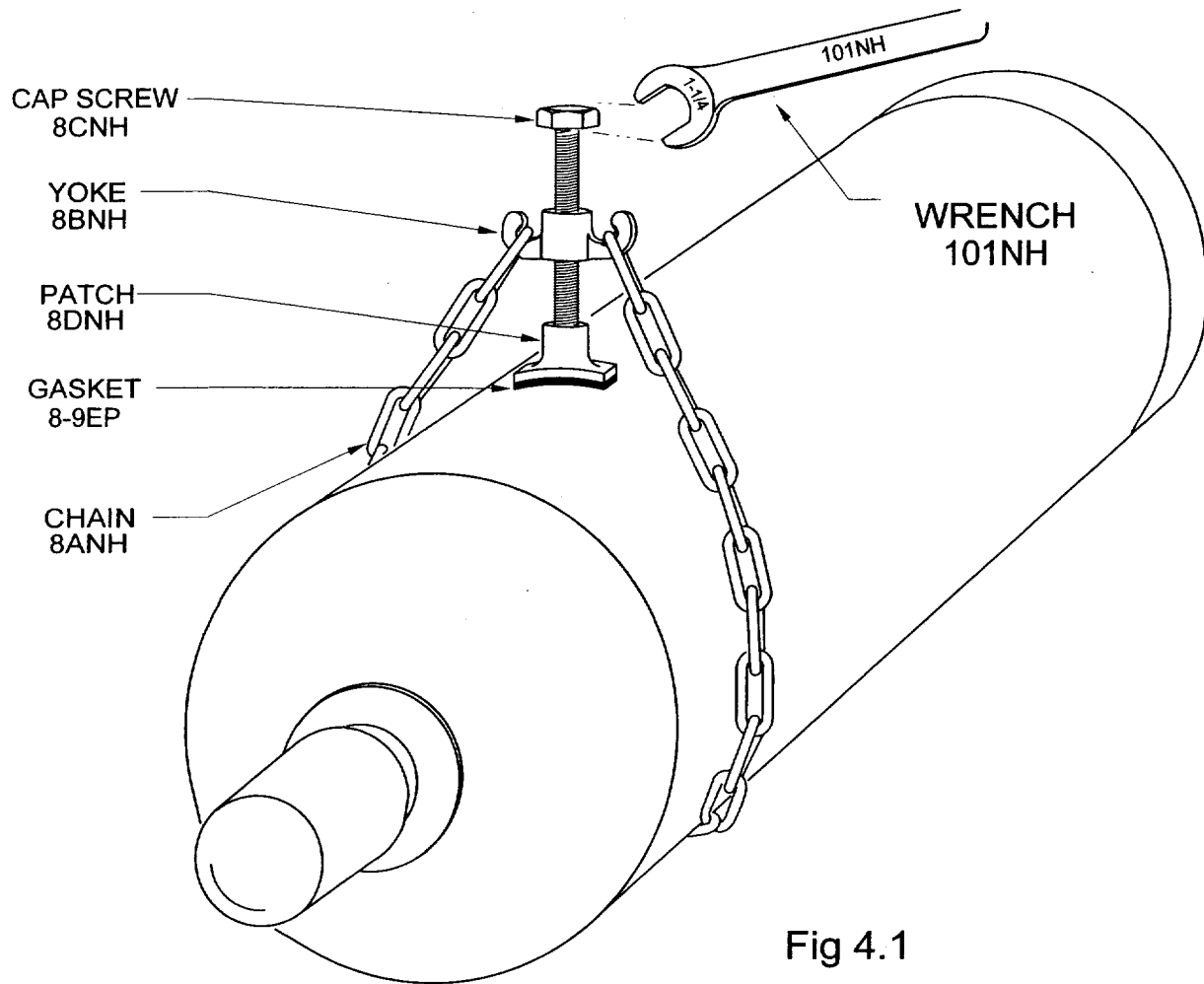


Fig 4.1

DEVICE 8NH

## 5. HANDLING OF AMMONIA REMAINING IN CYLINDER

The containment of leaks by the Anhydrous Ammonia Emergency Kit devices is only an interim measure.

VALVE YOKE (A-9NH) and VALVE ADAPTER (A-10NH) are included in this kit for use in disposing of remaining ammonia in a capped cylinder. This procedure should be attempted by experienced personnel only.

**CONSULT WITH THE AMMONIA SUPPLIER IMMEDIATELY  
AND ARRANGE FOR ULTIMATE DISPOSAL**

If supplier is unknown, see page 2 (section 1.5) "Assistance" for instructions.

## 6. KIT MAINTENANCE

**NOTE** All parts of the Anhydrous Ammonia Emergency Kit should be maintained in a ready to use condition.

### 6.1 After Use

Inspect all parts for damage, wear and corrosion. Clean and dry all parts used. Lubricate movable parts with a non-reactive lubricant. Replace all gaskets used.

### 6.2 Routine

The kit should be frequently inspected by the person responsible for the equipment and checked with the contents list to insure that equipment is complete and ready for use. Many owners coordinate routine inspection with training drills.

All EPDM gaskets are stamped with the date of manufacture and should be removed from emergency use after a four-year shelf life. For further guidelines concerning the EPDM gaskets, consult the manufacturer (Indian Springs).

### 6.3 Spare Parts

Spare parts may be purchased by owners of this kit from the manufacturer. For information on ordering procedures consult the manufacturer, Indian Springs Specialty Products, Inc.

## 7. KIT LIMITATIONS

The kit devices are unsuitable for stopping leaks around the cylinder neck, base and foot-ring area.

**NOTE** This kit is designed for use on Anhydrous Ammonia cylinders only.

## Anhydrous Ammonia Emergency Kit

### Parts List

Part Number	Description	Quantity Per Kit
1ANH	Hood Assembly (with Vent Valve 1VNH)	1
1EPR	Gasket, Molded EPDM	2
1CNH	Yoke	1
1DNH	Cap Screw	1
1KNH	Cap Screw	3
1ENH	Base Assembly (with Chains 1FNH)	1
1RNH	Ramp	1
8ANH	Chain	1
8BNH	Yoke	1
8CNH	Cap Screw	1
8DNH	Patch	1
8-9EP	Gasket, EPDM, 3 x 3 square x 1/8 thick	2
200NH	Wrench, 3/8 sq. box, 1-1/4 open end x 7-1/4 long	1
101NH	Wrench, straight open end, 1-1/4 x 12 long	1
102NH	Wrench, straight open end, 1-3/8 x 12 long	1
A-1NH	Hammer, machinist, 48 oz.	1
A-3NH	Drift Pin, 9/32 x 1/2 x 6 long	1
A-4NH	Drift Pin, 7/8 x 1-1/4 x 8 long	1
A-7NH	Gasket Sack	1
A-8NH	Paint Scraper, 1-1/4 blade	1
A-9NH	Valve Yoke	1
A-10NH	Valve Adapter	1
144NH	Tool Roll	1
151NH	Kit Box	1
	Instruction Booklet	2

## EMERGENCY CONTACTS

Anhydrous Ammonia

Supplier \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

CHEMTREC\*

800-424-9300

CANUTEC\*\*

613-996-6666

Nearest Anhydrous Ammonia Producer or Packager: \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Police Department: \_\_\_\_\_

Fire Department: \_\_\_\_\_

First Aid: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* In the UNITED STATES, summon help through CHEMTREC, the Chemical Transportation Emergency Center at the Chemical Manufacturers Association in Washington, D.C.

48 contiguous states (toll free) \_\_\_\_\_

800-424-9300

If "800" number cannot be reached from  
your phone, call the "202" number instead.

Alaska and Hawaii \_\_\_\_\_

202-483-7616

(telephone advice only)

District of Columbia \_\_\_\_\_

483-7616

\*\* In CANADA, summon help through CANUTEC, the Canadian Transport Emergency Centre in Ottawa:

Canada, All provinces (call collect) \_\_\_\_\_

613-996-6666